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Without changing the alternators rotor design, the present inventions new type stator winding with the same number of stator poles as the rotor poles, could be done with alternately wound (north/south) coils, connected in series, forming a single coil with two free ends.

Each coil wound on a salient pole on the stator, is having approximately the same angular dimension, or width, as each rotor pole, with the copper winding totally surrounding each salient pole. When the rotors North/South poles are rotating in front of the North/South copper windings, power generation occurs simultaneously on all windings on all coils. This power is concentrated in the multitude of series connected coils extending into two free ends. Where it is ready to be used as AC or split into an AC connected to a first load and rectified DC connected to a second load.

The DC load could consist of charging of the battery, the small DC motors that are necessary for doors, windows and mirrors and also DC for ignition.

The present invention could also be described as an efficient generator comprising: a rotor journaled in an generator frame, said rotor having a plurality of poles, also having a stator with a like number of poles, each including alternately wound coils forming coupled to form a single coil with two free ends, connected to an AC load.

This new type alternator would be more efficient because substantially all the copper coils are active in front of rotor poles and generating AC all the time, as long as the generator is running. It only requires 4 diodes in a bridge circuit to transform this AC to DC, again with power savings. If required a capacitor could be connected across the D.C. output

The present invention could also be described as:

A split output generator with low loss switching devices comprising:

A generator having a first AC output connected to a first load through AC rated switches, said generator having a second output connected to a set of rectifying diodes, said rectified output connected to a second load through DC rated switches.

All the above mentioned savings of generator/alternator power, the increase in fuel efficiency, at a lower cost with greater reliability, is one of the basis of the present invention.